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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,020	11/24/2003	Akira Matsuda	032130	9168
38834 7590 02/06/2008 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			EXAMINER LAVILLA, MICHAEL E	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 02/06/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/719,020

Applicant(s)

MATSUDA ET AL.

Examiner

Michael La Villa

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20 and 22-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The title refers to subject matter that is no longer claimed, and so this subject matter should be deleted from the title.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
 4. A person shall be entitled to a patent unless –
 5. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
6. Claims 20 and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Atope JP 59-50190 for the reasons of record in the Office Action mailed on 7 March 2007.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
9. Claims 20 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rice et al. USPN 4,888,574 in view of Kazonovtse et al. (WPI World Patent Information Derwent, Vol. 29) for the reasons of record in the Office Action mailed on 7 March 2007.

Response to Amendment

10. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Atobe of the Office Action mailed on 7 March 2007. Applicant argues that the claimed "copper foil" is not met by the disclosed brass plate in Atobe because brass is made of an alloy, not of copper. One of ordinary skill in the art would understand that a "copper foil" would encompass foil made of copper and copper alloys and that a "copper alloy foil" would encompass foil made of copper alloy. In this regard, commercially available copper foils are frequently made of copper alloys. Brass is a well-recognized copper alloy that is predominantly made of copper. A claimed copper foil can therefore be reasonably broadly interpreted to encompass brass material. Hence, applicant's arguments are not persuasive, and so the rejection is maintained. Applicant may

choose to limit the claimed foils to those that are not alloy compositions to avoid this rejection.

11. In view of applicant's amendments and arguments, applicant traverses the section 102 rejection over Rice of the Office Action mailed on 7 March 2007. Rejection is withdrawn.

12. In view of applicant's amendments and arguments, applicant traverses the section 103 rejection over Rice in view of Kazonovtse of the Office Action mailed on 7 March 2007. Applicant argues that evidence in the Specification and in the declaration of 10 March 2006 demonstrate unexpected results. Applicant argues that the flow conditions were the same in all of the presented examples. While this representation is accepted for the purposes of applicant's arguments, applicant could provide an additional declaration to establish this fact since it has not been directly addressed in the presented information and since the referred to passage raises a question as to whether the flow conditions may have been different. While applicant has provided evidence that plating solutions having the claimed amounts of nickel sulfamate provide preferred plated films, the comparative baths may have far less total nickel in comparison to the inventive examples, which may explain the differences in plating properties. Kazonovste teaches roughly 200 g/l of all nickel species, including about 150 g/l of nickel sulfamate. It is unclear how the evidence shows that plated layers resulting from solutions having amounts of nickel sulfamate outside of the claimed range but total nickel amounts comparable to those claimed are different from those of

applicant that have claimed amounts of nickel sulfamate. Finally, the presented evidence relates to a copper foil with Rz of 2.1 microns. Applicant teaches that layer resistance is affected by layer thickness and that thickness variation depends on underlying surface roughness. See Specification (paragraph bridging pages 9 and 10). Hence, it is unclear how applicant has demonstrated that the observed preferred performance would be obtained for surfaces rougher than Rz of 2.1 microns. Therefore, rejections are maintained.


13. In view of applicant's amendments and arguments, applicant traverses the section 103 rejection over Rice in view of Gales of the Office Action mailed on 7 March 2007. Rejection is withdrawn.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
15. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa
31 January 2008


MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER